

Promoting conservation of European herpetofauna

– WORKING WITH THE EU NATURE DIRECTIVES

BÁLINT HALPERN

LIFE PLATFORM MEETING: Amphibian and Reptile Conservation (ARC)

Challenges and Opportunities in Europe

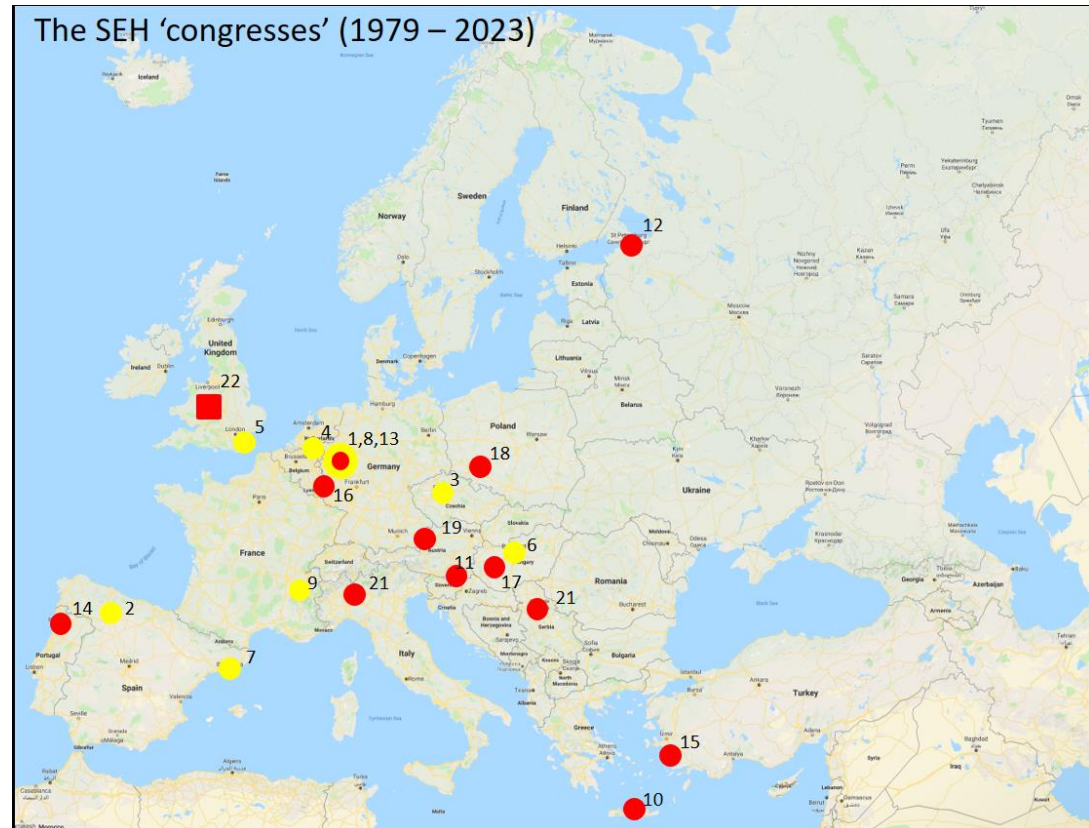
Santander, Spain - 22 May 2024



Societas Europaea Herpetologica



- ▶ The Societas Europaea Herpetologica (SEH) is a society of 400 members.
- ▶ SEH publishes a quarterly journal, *Amphibia-Reptilia*, and an open access online journal, *Herpetology Notes*.
- ▶ Biannually European Congress of Herpetology is organised by members.
- ▶ SEH has 3 committees:
 - ▶ Taxonomic Committee
 - ▶ Mapping Committee
 - ▶ Conservation Committee



« Congresses »
1979-2023

● 1st – 10th

● 2nd – 21st

■ 22nd:
Wolverhampton



Taxonomic Committee



- ▶ The Taxonomic Committee of SEH deals with the taxonomy and nomenclature of European herpetofauna.
- ▶ Topics include newly described species, resurrections of former synonyms or elevating subspecific names to specific rank, and nomenclatural issues.
- ▶ Chair: Jeroen Speybroeck, Vice-chair: Melitta Vamberger, Co-chair: Pierre-André Crochet, Co-chair: Wouter Boukema, 8 additional members



BRILL

Amphibia-Reptilia 41 (2020): 139-189



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Review

Species list of the European herpetofauna – 2020 update by the Taxonomic Committee of the Societas Europaea Herpetologica

Jeroen Speybroeck^{1,*}, Wouter Beukema², Christophe Dufresnes³, Uwe Fritz⁴, Daniel Jablonski⁵,
Petros Lymberakis⁶, Iñigo Martínez-Solano⁷, Edoardo Razzetti⁸, Melita Vamberger⁴,
Miguel Vences⁹, Judit Vörös¹⁰, Pierre-André Crochet¹¹

Abstract. The last species list of the European herpetofauna was published by Speybroeck, Beukema and Crochet (2010). In the meantime, ongoing research led to numerous taxonomic changes, including the discovery of new species-level lineages as well as reclassifications at genus level, requiring significant changes to this list. As of 2019, a new Taxonomic Committee was established as an official entity within the European Herpetological Society, Societas Europaea Herpetologica (SEH). Twelve members from nine European countries reviewed, discussed and voted on recent taxonomic research on a case-by-case basis. Accepted changes led to critical compilation of a new species list, which is hereby presented and discussed. According to our list, 301 species (95 amphibians, 15 chelonians, including six species of sea turtles, and 191 squamates) occur within our expanded geographical definition of Europe. The list includes 14 non-native species (three amphibians, one chelonian, and ten squamates).

Mapping Committee

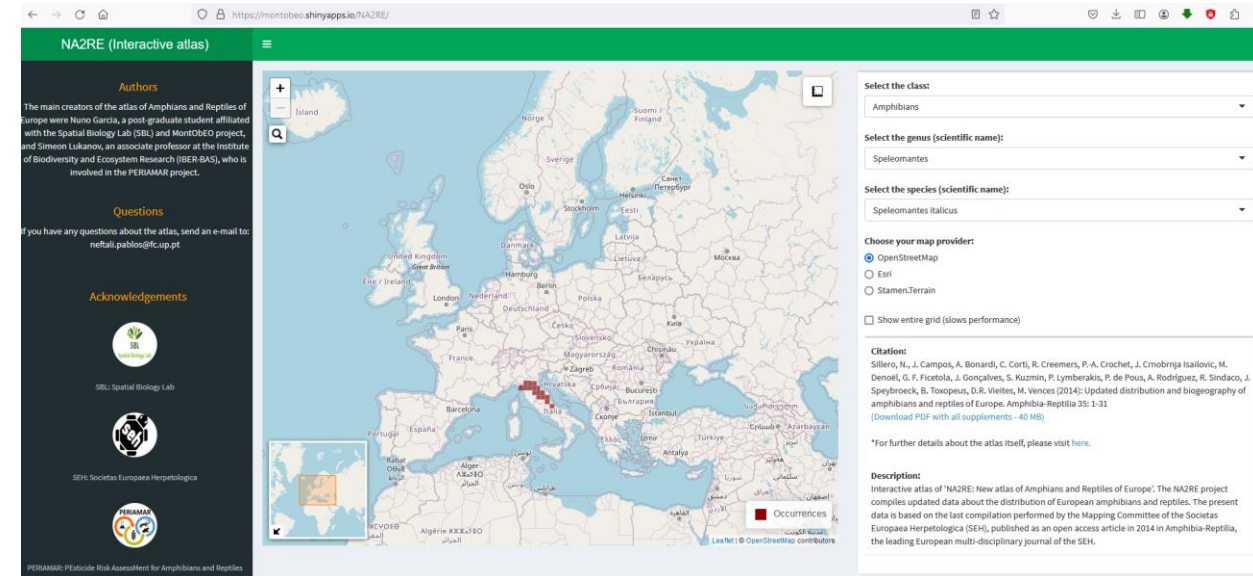


- ▶ Mapping Committee supports the NA2RE projects, an interactive atlas on the distribution of amphibians and reptiles in Europe (50x50 km resolution)
- ▶ Chair: Neftali Sillero + 6 board members

Amphibia-Reptilia 35 (2014): 1-31

Updated distribution and biogeography of amphibians and reptiles of Europe

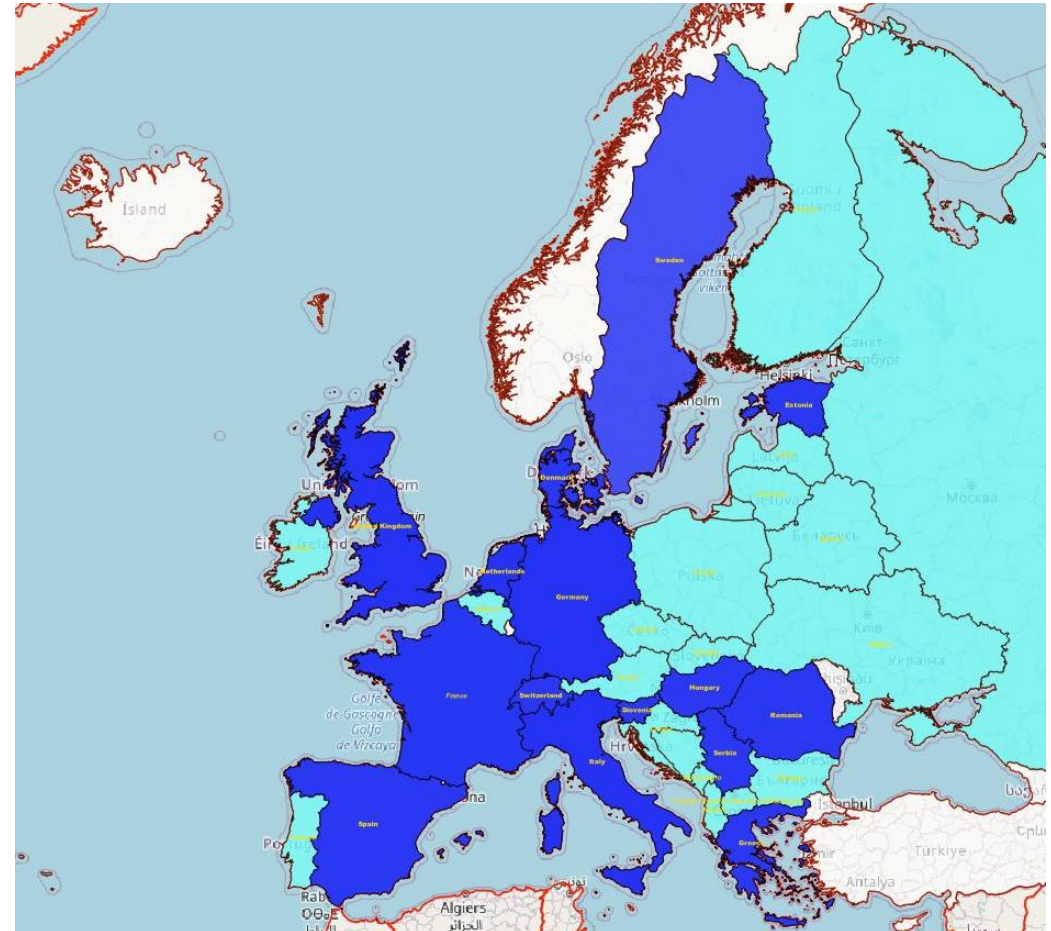
Neftali Sillero^{1,*}, João Campos¹, Anna Bonardi², Claudia Corti³, Raymond Creemers⁴, Pierre-Andre Crochet⁵, Jelka Crnobrnja Isailović^{6,7}, Mathieu Denoël⁸, Gentile Francesco Ficetola², João Gonçalves⁹, Sergei Kuzmin¹⁰, Petros Lymberakis¹¹, Philip de Pous^{12,13}, Ariel Rodríguez¹⁴, Roberto Sindaco¹⁵, Jeroen Speybroeck¹⁶, Bert Toxopeus¹⁷, David R. Vieites^{18,19}, Miguel Vences¹⁴



Conservation Committee



- ▶ Chair: Bálint Halpern, Vice Chair: Katja Poboljšaj
- ▶ 14 full members + 8 corresponding members - representing 15 countries (dark blue)
- ▶ additional country representatives – 28 countries (light blue)
- ▶ country reports from 20 countries
- ▶ Based on the SEH CC evaluation SEH annually awards the SEH Grant in Herpetology to projects orientated to conservation of amphibians and reptiles of Europe



SEH Grant in Herpetology



- ▶ **2020:** Oleksandr Zinenko, Edvárd Mizsei, Andrii Tupikov - Landscape ecology approach to understand local extinctions of the **steppe viper** - Ukraine
- ▶ **2022:** Philipp Böning, Amadeus Plewnia - Towards an early warning system for Bsal in enigmatic and endemic **Alpine salamanders** – Italy
Enrico Lunghi - **Sette Fratelli cave salamander** (*Speleomantes sarrabusensis*) monitoring - Italy
- ▶ **2023:** Ilaria Bernabò - Allochthonous fishes and **endemic newts**: a road map for a conservation strategy – Italy
Marilena Stamatiou, Savvas Zotos - Monitoring the population of the endemic **Cyprus grass snake** at Paralimni lake – Cyprus
- ▶ **2024:** Nikolett Ujhegyi, Emese Balogh, János Ujszegi - First in situ study on the effects of **Ranid Herpesvirus 3** on the fate of an amphibian population – Hungary
Dávid Herczeg - Testing for a Trojan Horse effect: can microplastics enhance the transmission of deadly **ranaviruses** between amphibians in the aquatic environment? - Hungary



European Board of Herpetological Societies



- ▶ In order to improve communication between SEH and partner societies, The European Board of Herpetological Societies (EBHS) was created in 2019.
- ▶ Currently 10 member societies form the EBHS.
- ▶ The aim of mutual promotion between SEH and each partner society, facilitating communication among herpetologists and stimulating activities related to herpetology.
- ▶ The aim is therefore also to be complementary to other existing European networks.

Amphibia-Reptilia 43 (2022): 209-212



Direct communication



- ▶ Hungarian meadow viper conservation in Hungary
- ▶ Drawing the attention of Tour de France organisers to cordon viper habitats during étape in Mont-Ventoux
- ▶ Summary paper on European pond turtle conservation in Europe
- ▶ Persuading French law-makers not to reduce vipers' protection status in France
- ▶ Letter to Italian Authorities to stop harmful forestry to save Aurora salamander



Contribution to EU-level policies



- ▶ SEH is an international non-governmental member of IUCN and actively participates in the work of European Habitat Forum.
 - ▶ REFIT (fitness check of 'Nature Directives')
 - ▶ Green infrastructure/ No-net loss
 - ▶ Agriculture – trying to shape CAP
 - ▶ Invasive Alien Species
 - ▶ Management of N2000 sites
 - ▶ Input to biogeographic seminars (e.g. Atlantic Biogeog region) & workshops
 - ▶ Article 17 reporting – local NGOs are giving their input, target is using comparable methods in all MS
 - ▶ Nature Reconstruction Law



Restoring EU's nature



European-level policies



- ▶ SEH also participates in the work of Bern Convention Amphibian and Reptile Expert Group.
- ▶ Raising direct cases
 - ▶ Hungarian meadow viper (*Vipera ursinii rakosiensis*) in Hungary and Romania
 - ▶ Green toad (*Bufo viridis*) in France
- ▶ Preparation of European Action Plans (2006) – serving as good reference points, when setting up local actions or LIFE-projects
 - ▶ Meadow vipers (*Vipera ursinii*)
 - ▶ Crested newts (*Triturus* sp.) complex
 - ▶ Italian agile frog (*Rana latastei*)
 - ▶ Ascelupian snake (*Zamenis longissimus*)
 - ▶ Sand lizards (*Lacerta agilis*) – North-Western edge populations
- ▶ Cooperation with DanubeParks: target species Danube crested newt (*Triturus dobrogicus*) – aim is to prepare a regional action plan



Red-list reassessment



- ▶ IUCN red lists (2009) give 'conservation priorities' and serve as prime reference for conservation status in many cases
- ▶ Issues with Red Listing methods
 - ▶ National
 - ▶ Regional
 - ▶ Global
- ▶ Taxonomic changes
- ▶ Targeting equal evaluation criteria
- ▶ Long process: - workshops on European Congresses ever since
- ▶ Online meeting in October 2022 – ERL Pulse
- ▶ Partially published online – rest is expected soon...

Expert participants at the Reptiles and Amphibians Red List workshop, September 2008, Antalya, Turkey. Photograph © Oğur Koc.



Invasive Non-native Species



- ▶ Native amphibians and reptiles are directly threatened by the „by-products” of legal and illegal pet trade – difficult to formulate preventive measures, however...
- ▶ Lot of other IAS species affect amphibians and reptiles negatively
- ▶ Comments to DG Env re. Invasive Alien Species Regulation 1143/2014 and species listing
- ▶ We are aware that the list were partly formed by scientific evidence, finally shaped by MS interventions
- ▶ Clear link between non-native species and diseases

Emerging diseases



- ▶ Chytridiomycosis: *Batrachochytrium dendrobatidis* (Bd)
B. salamandrivorans (Bsal)
- ▶ Ranaviruses
- ▶ Snake Fungal Disease (SFD)
- ▶ Research on pathways of diseases - Link between pet trade and diseases
- ▶ Query to EC regarding link to Invasive Alien Species Regulation 1143/2014
- ▶ Research-groups and consortiums are already available to help with planning
- ▶ SEH-CC aims to promote cooperation between research groups, countries and authorities

Take home messages



- ▶ SEH is an important network of scientists and conservation practitioners in the field of herpetology with more networking potential.
- ▶ IUCN Red list of threatened species is an important reference point, therefore we are involved and keen on the update of European species.
- ▶ The Habitats Directive is robust tool, unable to react quickly to taxonomic changes or detected population trends.
- ▶ It is important that amphibians and reptiles are listed as conservation priorities, but related measures are not strong enough to stop large scale tendencies and even within N2000 we still experience habitat loss or degradation of selection criteria species.

Take home messages



- ▶ As amphibians and reptiles are considered as good indicators of conservation status, we promote the focus on the edge position population trends, forecasting future processes on a larger scale.
- ▶ The planned restoration law was giving hope of stronger commitment and direct measures, helping to stabilise or even increase suitable habitats for amphibians and reptiles, forcing member states to set transparent conservation targets, involving experts and stake-holders in meeting them.
- ▶ Emerging diseases, threatening amphibian and reptile populations, is neglected subject with less attention. Many of these pandemics are results of uncontrolled pet trade or unclear regulations, however current technology enables us for screening pathogens and even curing to some level.
- ▶ We encourage to use similar approach like tackling the problem of IAS, setting up early-warning systems and future management plans for emerging diseases.

Thank you for your attention!

